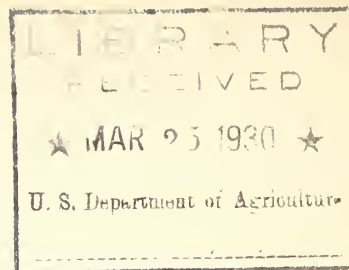


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1929 CORN BORER SITUATION

A radio talk by Dr. W. H. Larrimer, Bureau of Entomology, U. S. Department of Agriculture, through Station WRC and 32 other stations associated with the National Broadcasting Company, at 1:15 p.m., E.S.T., Tuesday, March 11, 1930.

A reasonable discussion of the 1930 European corn borer situation this early in the year is bound to be pretty well sprinkled with "ifs," and even then may be taken with the proverbial grain of salt.

Perhaps, as a little review, you may be interested in knowing just where the corn borer is now known to occur in the United States and Canada. The borer was brought into the United States in shipments of broom corn from southern Europe during 1909 or 1910, when there was a scarcity of that crop in this country. It was discovered near Boston in 1917 and a year or so later in eastern New York State, and later near Saint Thomas, Ontario. All of these infestations are thought to have been the result of shipments of the same lot of broom corn. In Canada, the corn borer now occurs in the southern portion of Quebec and Ontario, as well as in certain localities in New Brunswick and Nova Scotia. The infested area in the United States includes the southern two-thirds of New England, the northern extremity of New Jersey, all of New York, three-fourths of Pennsylvania and Ohio, the northern panhandle of West Virginia (I just learned the other day that West Virginia has two panhandles), nearly all of the agricultural portion of Michigan, and the northeastern fourth of Indiana. The borer has been found farthest West in Boone Township, Porter County, Indiana, and farthest South in Ohio Township, on the Ohio River, in Gallia County, Ohio.

Now we start with the "ifs." If during the coming season the spread of the corn borer is normal, there is about a fifty-fifty chance that it will get into Illinois to stay and will likely hop across the Ohio River into Kentucky. Maryland may also share the doubtful fame of the corn borer States, although spread of the borer through the mountainous districts of West Virginia and Pennsylvania is erratic and irregular. This spread of 20 to 30 miles per year is the result of the natural flight of the corn borer moths and can be stopped just about as easily as the wind can be made to quit blowing.

In the region of the Great Lakes, which is of major interest to the Corn Belt, commercial damage during the past season occurred only in Ohio and Michigan. Losses in yield resulting from direct injury by the corn borer and estimated at from 10 to 30 per cent were observed in a few fields near Lake Erie. Fields showing traces of injury were observed in greater numbers than ever before, especially in northwestern Ohio.

If the coming season is favorable, there are enough borers present in northwestern Ohio and southeastern Michigan to cause serious infestation unless adequate control measures are practiced. Since this district is

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probably going to be the first in which the corn borer shows what it can do in our own Corn Belt, it will be watched with intense interest during the coming season.

Of the many factors which may be responsible for the increase or decrease in borer abundance during the coming season as compared with previous years, there can be placed in two main groups those of outstanding importance: first, those the farmer can't control and, second, those he can.

In the first place, the parent moths are as temperamental as the old-fashioned setting hen and require nice warm days to lay the maximum number of eggs. Then, the infant mortality among the young caterpillars makes their early days pretty much of a gamble; hot, dry weather is hard on them, as are also hard, dashing rains. Nature looks out for these shortcomings, however, and balances things up by enabling a single female moth to lay an average of 500 eggs. Thus, when the moths begin to emerge in June, all the farmer can do is plant his corn a little late and pray for weather conditions unfavorable to the corn borer and a late frost next fall; in other words, there is very little he can do.

The most important item in the old recipe for rabbit stew is to first catch your rabbit; thus, if practically all the corn borers were killed, there would be few left to produce moths to lay eggs in June and July, no matter how favorable the weather conditions. The borers can be killed by feeding or burning, or plowing-under cleanly, all old cornstalks by May 15. In this case, it is the farmer who seems to be a little bit temperamental and, as simple as these control measures sound, it is doubtful if they will be practiced satisfactorily until damage by the borer is quite evident over a considerable area. This may be just human nature, after all.

To return then to the corn-borer outlook for 1930, we may expect further natural spread in all directions from the infested area. We may expect either an increase or a decrease in the number of borers and a resultant increase or decrease in the amount of damage done, depending on the thoroughness of the clean-up in the heavily infested area and on whether or not weather conditions are favorable to the corn borer during June and July. The way to play safe, then, is to prevent the emergence of the moths by killing off the overwintering caterpillars.

The job of killing off the overwintering caterpillars of the borer has been reduced to standard farm practice through our years of experience in the infested districts. Just to remind those of you who live in infested areas, and to advise those of you who live in areas threatened with infestation, I shall summarize briefly the practices to be applied in the next three months. Here they are:

In March.-- Rake and burn the stalks in old cornfields if this has not already been done. Do the early spring plowing with an eye to borer control.

Just a few observations on the proper conduct of these two jobs for

most effective control. Of course, the raking and burning job means that the dead stalks must be broken or cut loose at the ground surface. The agricultural engineers of the Department and of Ohio State University have developed a sled-type stalk shaver to help out on this job. The shaver can be made at home in the farm shop. It is intended for use in the spring just before the stalks are raked and burned. If you live in the infested area and want directions for making the sled shaver, write to the Department for our bulletin called "Construction of a Sled-Type Cornstalk Shaver." It contains working drawings and a bill of materials.

Now as to the proper methods of plowing for corn borer control: The important thing is to leave no trash on the surface. The engineers of the Department have found that, in order to do a clean job, land must be plowed at least six inches deep. Besides plowing at the proper depth, use a 14-inch or wider bottom plow and, if you use a gang plow, there should be plenty of clearance between the bottoms. The plow does best work if the bottom is shaped to make wide, open furrows, and to turn the soil smoothly and completely. All plows should be equipped with large rolling coulters, jointers, and covering wires. Needless to say, it takes a careful operator, even with the best of equipment to do the thorough, clean plowing job necessary for borer control.

Now your April program for borer control, sandwiched in with other farm operations, goes like this:

Rake and burn stalks, if you haven't already done so; plow for corn, disk corn ground; destroy cobs and trash around barns and feed lots.

And in May, the farmer in the corn borer area cultivates the corn ground in such a manner that any stalks that may have been plowed under are not pulled to the surface, and plants his corn.

This calendar of farm operations under corn borer conditions is contained in the Department of Agriculture's Farmers' Bulletin entitled "Farm Practices Under Corn Borer Conditions." A copy is yours without charge if you wish it.

